

## **REMARKS**

By this Amendment, Claims 1, 14 and 17-20 have been amended, to place this application in immediate condition for allowance.

In the outstanding Office Action, the Examiner has rejected Claims 1, 14, 17 and 19 under 35 U.S.C. 112, second paragraph, as allegedly being indefinite. Regarding Claims 1, 14 and 19, the independent claims, the Examiner has indicated that the step “identifying means for identifying a highest single frequency of said image” is unclear. In this regard, the Examiner has alleged that “it is unclear from the context of the claim how such ‘highest single frequency of said image’ is identified.” In order to clarify this aspect of the independent claims, they have been amended to specify that a “Fast Fourier Transform (FFT)” of the image is computed and that the identification is of the highest single frequency of the FFT of the image, with that frequency comprising a spectral peak of the FFT. These amendments are believed to clarify the independent claims under the purview of 35 U.S.C. 112, second paragraph.

Next, the Examiner alleges that there is insufficient antecedent basis in the specification for the limitation in Claim 14 “frequency components of said image  $f_0$  to  $f_n$ .” In response, reference is made to the specification at pages 17-18 where discussion is had of  $F_0$  to  $F_n$ . Reference is also made to Figure 25 which discloses the determination of phases of frequency components  $F_1$  to  $F_n$ . As such, it is submitted that appropriate antecedent basis is in the application as originally filed.

The Examiner has alleged that the limitation “mask pattern shift  $Y_m = Y_d/K_m$ ” in Claim 17 is unclear in that the claim does not recite the meanings of these terms. Accordingly, Claim 17 has been amended to define the terms in the cited formula. Basis for this amendatory subject

matter is found in the specification on page 7 where the formula is discussed. Thus, on page 7 of the specification,  $Y_m$  is identified as the point source,  $K_m$  is the pattern magnification factor, and  $Y_d$  is the detected pattern position. Accordingly, it is submitted that Claim 17 as amended is definite.

Accordingly, for the reasons set forth above, all of the claims as now amended are believed to be fully definite under the purview of 35 U.S.C. 112, second paragraph.

The Examiner has rejected Claims 1-10 and 13-18 under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 5,640,241 to Ogawa in view of U.S. Patent No. 6,457,169 to Ross. After reviewing this ground of rejection, Applicant believes that the Examiner intended to cite another patent to Ogawa, namely, U.S. Patent No. 5,499,098. This is because the Ogawa patent cited by the Examiner does not mention use of a mask while the Ogawa '098 patent does mention use of a mask. Thus, for purposes of this response, Applicant has assumed that the Examiner intended to apply Ogawa '098 instead of Ogawa '241.

In response to this ground of rejection, Applicant respectfully notes that Ogawa '098 fails to teach use of a mask that has a plurality of sinusoidal frequencies. Rather, the mask of Ogawa '098 consists of a digital mask with the preferred embodiment employing an M-sequence pattern. In Ogawa '098, no information is gleaned from taking the frequency domain representation of the image. Rather, the image is digitized in time domain and compared to a reference signal. Ross teaches that it is possible to identify peak frequencies in Fourier domain of a mask pattern. However, Ross fails to teach how to use such information to determine pattern shift. Furthermore, the teachings of Ross would not be effective if applied to the teachings of Ogawa '098.

By contrast, the present invention employs a plurality of frequencies that are imaged onto the detector array and frequency domain identification of the peaks and their corresponding phase changes are used to determine pattern shift.

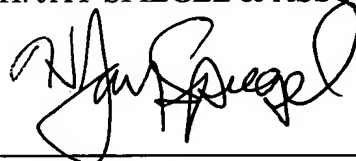
Accordingly, it is submitted that Ross and Ogawa '098 are not combinable under 35 U.S.C. 103(a). There is no suggestion or teaching in these references, taken as a whole, that they should be combined together to meet the terms of the claims at issue, particularly as amended. The only place where the Examiner could have gone for the suggestion to combine the two references together is in Applicant's own disclosure. Since the hindsight reconstruction of the prior art in light of Applicant's own disclosure is a practice forbidden in patent law, it is respectfully submitted that these grounds of rejection are without basis and should be withdrawn.

Since the independent claims patentably distinguish from the combination of Ogawa '098 and Ross, it is respectfully submitted that the dependent claims are equally patentable for the same reasons.

As such, reconsideration and allowance of this application are respectfully solicited.

Respectfully submitted,

H. JAY SPIEGEL & ASSOCIATES

A handwritten signature in black ink, appearing to read 'H. Jay Spiegel', is written over a horizontal line.

H. Jay Spiegel  
Attorney for Applicant  
Registration No. 30,722

H. JAY SPIEGEL & ASSOCIATES  
P.O. Box 11  
Mount Vernon, Virginia 22121  
(703) 619-0101 - Phone  
(703) 619-0110- Facsimile